



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,513	01/16/2002	Ali Adibi	Q096	7692
7590 06/30/2004				
Daniel L. Dawes Myers, Dawes & Andras LLP Ste. 1150 19900 MacArthur Blvd. Irvine, CA 92612			EXAMINER TSAI, H JEY	
			ART UNIT 2812	PAPER NUMBER

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application N . 10/050,513	Applicant(s) ADIBI ET AL.	
	Examiner H.Jey Tsai	Art Unit 2812	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 April 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 June 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/18/02</u> . | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2812

***Election/Restriction***

Applicant's election without traverse of claims 11-21 filed on April 12, 2004 is acknowledged.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 11-21 are rejected under 35 U.S.C. § 102(e) as being anticipated by Deliwala 2003/0039430.

Deliwala discloses a tapered optical coupling comprising:

a substrate 9012, see figures 82-86 and para. 451-474, or fig. 72, 66,

a slab waveguide 9014 on or in the substrate 9012, para. 451-453,

a funnel-shaped termination 9034/9024 (horn and channel) on or in said substrate 9012 and optically coupled to the waveguide 9014.

a photonic crystal 9022 and photonic crystal is optically coupled to slab waveguide 9014, para. 453, 455, 456,

slab waveguide 9014 is integral with photonic crystal 9022,

funnel-shaped termination 9034/9024 is optically coupled to optic fiber, para. 452,

Art Unit: 2812

funnel-shaped termination is formed by shadow deposition (no patentable weight given on process limitation see MPEP 2173.05(p)),

funnel-shaped termination composed of material having an index of refraction approximately matching the slab waveguide, para. 464+, 456, 354, 165,

funnel-shaped termination is composed of polycrystalline silicon, para. 448, 409, 404,  
slab waveguide is composed of GaAs, para. 120, 168,

funnel-shaped termination is a half- funnel shape (one or two dimensional waveguide, para.455-456),

funnel-shaped termination is a full-funnel shape (three dimensional waveguide, para. 457),

funnel-shaped termination comprises a surface for optical coupling inclined with respect to said substrate (two or three dimensional waveguide), figs. 82, 84-85 and 86.

Claims 11, 14, 18 and 20 are rejected under 35 U.S.C. § 102(b) as being anticipated by Meade et al. 5,526,449.

Meade et al. discloses a tapered optical coupling comprising:

a substrate 102, see figure 12, col. 10, lines 23+,

a slab waveguide 110 on or in the substrate 102,

a funnel-shaped termination 120 on or in said substrate 102 and optically coupled to the waveguide 110/114,

funnel-shaped termination 120 is optically coupled to optic fiber 112,

slab waveguide 110 is composed of GaAs 202, col. 7, lines 60+,

funnel-shaped termination 120 is a full-funnel shape.

Art Unit: 2812

**Any inquiry of a general nature or clerical matters or relating to the status of this application or proceeding should be directed to the Group customer service whose telephone number is 571-272-1626 and Fax number (703) 872-9306.**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. Jey Tsai whose telephone number is (571) 272-1684. The examiner can normally be reached on from 7:00 Am to 4:00 Pm., Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Niebling can be reached on (571) 272-1679. The fax phone number for this Group is (703) 872-9306.

hjt

4/28/04

A handwritten signature in black ink, appearing to read 'H. Jey Tsai', with a stylized, cursive script.

H. Jey Tsai  
Primary Examiner  
Patent Examining Group 2800